

AUTHORS: Topchiyev, A. V., Member, Academy of Sciences, USSR, Musayev, I. A., Iskhakova, Z. Kh., Kisilinskiy, A. N., Gal'pern, G. D. SCV/20-120-5-35/67

TITLE: Unsaturated Hydrocarbons in Thermal Cracking Gasoline (Nepredel'nyye uglevodorody benzina termicheskogo krekinga)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 5, pp. 1056 - 1058 (USSR)

ABSTRACT: After a short survey of their own previous papers in the said field (Refs 1-3) the authors communicate their investigation results of the composition of the olefine part of the fraction 60 - 150°. From these fractions 10 narrow fractions were distilled off (Table 1). The molecular weights proved that these 10 fractions may be classified in 4 groups. The fifth fraction on the whole apparently consists of cycloolefines. The authors investigated the intricate group composition of the fractions by means of a combination of the following methods: the sulfuric acid method, the hydro- and dehydrogenation catalysis and the aniline method. The content of cyclopentene hydrocarbons considerably exceeds the content of cyclohexene olefines in all fractions, as

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Unsaturated Hydrocarbons in Thermal Cracking Gasoline

SOV/20-120-5-35/67

is shown in table 2. The distribution of cyclenes in the fractions was irregular, as, for example the content of cyclenes in the fractions Nr 8 and 10 exceeded the content of alkenes. The proportion of the first amounted in the mentioned fractions to 69 or 55%, respectively. The fifth fraction contained the greatest amount of cyclenes - 90%. The individual composition of the hydrocarbons was investigated by means of the spectra of the light combination scattering. The methods and the apparatus were the same as in (Ref 1). The final results of the determination of the composition of the hydrocarbon of the unsaturated gasoline part which was isolated from the fraction 60 - 150° of the thermal gasoline cracking are given in table 3. As is shown the aliphatic olefines are on the whole represented by not ramified and only little ramified olefines, whereas the cyclenes belong to the 1- and 2-substituted compounds. The not detected diolefines and olefines with quaternary carbon atoms either do not exist in the investigated gasoline or their quantities are outside the range of the spectral analysis. Saturated hydrocarbons were found in none of the fractions. There are 3 tables and 11 references, 7 of which are Soviet.

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5(3)

AUTHORS: Karaulova, Ye. N., Meylanova, D. Sh., SOV/20-123-1-26/56
Gal'pern, G. D.

TITLE: ~~Synthesis of~~ 2-Methyl- and 3-Methyl-1-Thia-Indans and
2-Ethylthiaindene (Sintez 2-metil- i 3-metil-1-tiaindanov
i 2-etiltiaindena)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1,
pp 99 - 101 (USSR)

ABSTRACT: In connection with the investigation of the sulfur-
containing compounds of the medium naphtha fractions
so-called semiaromatic sulfur compounds are of interest.
Among them, particular attention deserve the alkyl
derivatives of the 1-thia-indan (2,3-dihydro-thia-
naphthene) with substituents in a 5-membered ring. The
authors found, in search for a synthesis method for
such compounds, that the hitherto unknown 2- and 3-
methyl-1-thia-indans (III) can be easily produced
by a gradual reduction of the sulfones (I) of the
corresponding 2- and 3-methyl-thia-indenes. A simple

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2

Synthesis of 2-Methyl- and 3-Methyl-1-Thia-Indans and
2-Ethylthiaindene

SOV/20-123-1-26/56

method of synthesis of the 2-alkyl-thia-indenes is the metallization of the thia-indene (thia-naphthene) by n-butyl lithium with subsequent alkylation by dialkyl sulfates. By the influence exerted by dimethyl- and diethyl sulfate upon 2-thia-indenyl lithium the 2-methyl-thia-indene and the 2-ethyl-thia-indene heretofore not described were obtained. The first can be oxidized by hydrogen superoxide to form 2-methyl-thia-indene sulfone (Ia). The structure of the 2-methyl-1-thia-indan (IIIa) was confirmed by a synthesis according to the given scheme. Experimental data (being not denoted as such), are following. There are 6 references, 1 of which is Soviet.

ASSOCIATION: Institut nefi Akademii nauk SSSR (Petroleum Institute of the Academy of Sciences, USSR)

PRESENTED: June 14, 1958, by A.V.Topchiyev, Academician

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~~GAL'PERIN~~, GAL'PERN, G.D.

О ПРИРОДЕ СЕРА.
И АЗОТОРГАНИЧЕСКИХ СОЕДИНЕНИИ НЕФТИ
Г. А. Галаперн, Н. М. Давыдов, К. Н. Коршунов,
В. Г. Луковников

VIII Mendeleev Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports scheduled to be presented at above mentioned congress
Moscow, 13 March 1979.

JALPERIN, G. E., TOPCHENKOV, A. V., MOSAYEV, I. A., LITVINOVA, E. Kh.,
KISLINSKIY, A. N.

"Studying the Chemical Composition of Benzines Containing Unsaturated
Hydrocarbons."

Report submitted at the Fifth World Petroleum Congress, 30 Mar -
5 June 1959. New York.

GAIPIRI, G. I., OBYEDKOV, A. V., AIVAZOV, M. I., GIGIDA, Y. I.,
KARAUOVA, E. M., LUKYANITSA, V. G., RADWSKAYA, A. A., TROSHYEV, V. D.
(SECTION V)

"Composition of Sulfur- and Nitrogen-Organic Compounds Contained in
the Oil of the eastern Areas in the Soviet Union."

Report submitted at the Fifth World Petroleum Congress, 30 May -
5 June 1959. New York.

GAL'PERN, G.D.

LEVENSON, Viktor Emanuelovich; KUZNETSOVA, Mina Pavlovna; MAKSIMOVA, Serafima Nikolayevna; GAL'PERN, G.D., doktor khim.nauk, otv. red.; KOTLYAREVSKAYA, F.S., red.izd-va; SIMKINA, G.S., tekhn.red.

[Bituminology of the Paleozoic of Tatarstan and Bashkiria]
K bituminologii paleozoiia Tatarii i Bashkirii. Moskva, Izd-vo
Akad.nauk SSSR, 1959. 87 p. (MIRA 13:1)
(Tatar A.S.S.R.--Petroleum geology)
(Bashkiria--Petroleum geology)

GAL'PERN, G.D.

PHASE I BOOK EXPLOITATION

SOV/4606

Akademiya nauk SSSR. Institut nefti

Khimiya nefti (Petroleum Chemistry) Moscow, 1959. 311 p. (Its: Trudy, tom 13) Errata slip inserted. 2,000 copies printed.

Resp. Ed.: G.D. Gal'pern, Doctor of Chemical Sciences; Ed. of Publishing House: L.S. Povarov; Tech. Ed.: V.V. Volkova.

PURPOSE: This book is intended for organic and industrial chemists and specialists in petroleum technology.

COVERAGE: This issue of the Transactions of the Petroleum Institute of the Academy of Sciences USSR contains twenty-five articles which review original laboratory experiments conducted by personnel of the Otdel khimii i tekhnologii nefti (Department of Chemistry and Petroleum Technology). Individual papers deal with studies of the composition and properties of petroleum and petroleum products, methods of their separation and synthesis, and physicochemical characteristics of standard petroleum compounds. The use of gaseous solutions to distinguish heavy raw-petroleum fractions from ozocerites, thermal processes of contact and catalytic refining and synthesizing, and theoretical problems

~~Card-1/6~~

SOV/4606

Petroleum Chemistry

in the pre-refining treatment of petroleum are also discussed. References accompany each article.

TABLE OF CONTENTS:

From the Editor

Pokrovskaya, Ye.S. Alkylation of Alkyl Benzenes With Some Olefins and Cyclopentenes

Gal'pern, G.D., M.M. Kusakov, and N.A. Shimanko. Investigation of the Absorption Spectra of Some Benzene Derivatives in the Near Ultraviolet Range

Pokrovskaya, Ye.S. Synthesis of Ethylindanes by the Alkylation of Indane With Ethyl Bromide

Musatov, K.A. Chromatographic Separation of Aromatic and Sulfurous Concentrates From Kerosene

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- Gal'pern, G.D., Ye.N. Karaulova, and T.S. Novozhilova. Study of the Adsorption of Sulfoxides From Dilute Solutions 51
- Sanin, P.I., and N.V. Melent'yeva. Influence of the Structure of Hydrocarbons on Their Viscosity 58
- Sergiyenko, S.R., Yu.T. Gordash, M.M. Kusakov, and M.V. Shishkina. Structure of Naphthalene Homologs in the High-Molecular Fraction of Petroleum 80
- Sergiyenko, S.R., M.I. Krasavchenko, and M.P. Teterina. Conversion of High-Molecular Aromatic Compounds From Romashkino Petroleum at 300-350°C 97
- Bezinger, N.N., G.D. Gal'pern, and T.I. Savost'yanova. Determination of the Total Amount of Nitrogen in Petroleums by the Modified Micro Method of Dumas 111
- Sergiyenko, S.R., P.Ya. Demenkova, I.O. Delone, and A.P. Kurbatskaya. Distribution of "Microelements" [Trace Elements] in Petroleum Tars and Asphaltenes 118

Card 3/6

AUTHORS: Karaulova, Ye. N., Meylanova, D. Sh., 30V/79-29-2-63/71
Gal'pern, G. D.

TITLE: Synthesis of 3-Methyl-1-Thiaindane and Regrouping of Allyl-
aryl Sulfones (Sintez 3-metil-1-tiaindana i peregruppirovka
allilarilsul'fonov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 662-666 (USSR)

ABSTRACT: Of topical interest is the synthesis of the so-called "semi-
aromatic" bicyclic compounds, as components of various mineral
oils, especially those of the homologues of 1-thiaindane, with
substituents in the hydrogenized ring. H. I. Backer and N. Dost
(Ref 1) found that on heating allylphenyl sulfone with H_2SO_4 ,
which contains boron fluoride, an isomerization takes place
under formation of a product, to which the structure of
3-methyl-2,3-dihydrothionaphthene sulfone was ascribed. The
reduction of the sulfone group therein should lead to
3-methyl-1-thiaindane (3-methyl-2,3-dihydronaphthene). How-
ever, on reducing the "cycloisomerization product" of allyl-
phenyl sulfone, which was obtained according to reference 1,
the authors found no 3-methyl-1-thiaindane, but propylphenyl

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Synthesis of 3-Methyl-1-Thiaindane and Regrouping
of Allylaryl Sulfones

SOV/79-29-2-63/71

sulfone, almost quantitatively. Thus the compound assumed by the above authors as being 3-methylthiaindane sulfone has no bicyclic structure; the isomerization product of allylphenyl sulfone was found to be a propenylphenyl sulfone. Likewise, propenyl-n-tolyl sulfone forms on the action of H_2SO_4 in the presence of boron fluoride upon allyl-n-tolyl sulfone; on the reduction with $LiAlH_4$ the latter is transformed into propyl-n-tolyl sulfone. Thus, on the action of H_2SO_4 upon allylaryl sulfones no cyclization takes place under formation of 3-methyl-1-thiaindane sulfone. In this connection, allylaryl sulfones isomerize immediately into propenyl compounds in the way shown by scheme 1 in reference 2. Further experiments showed that the synthesis of 1-thiaindanes by cyclization of allylaryl sulfides and sulfones is not possible in good yields. The synthesis of 1-thiaindanes was also attempted over thiaindenes (benzothiophenes) and their derivatives. 3-methyl-1-thiaindane was obtained by the reduction of 3-methylthiaindene sulfone (Scheme 2). The structure of 3-methyl-1-thiaindane was

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Synthesis of 3-Methyl-1-Thiaindane and Regrouping
of Allylaryl Sulfones

SVV/79-29-2-63/71

determined by hydrodesulphurization over nickel (Scheme 3).
The yield in 3-methyl-1-thiaindane amounts to 41 %, calculated for thiophenol. There are 10 references, 2 of which are Soviet.

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Petroleum Institute of
the Academy of Sciences, USSR)

SUBMITTED: December 4, 1957

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5(3)

SOV/79-29-9-48/76

AUTHORS: Karaulova, Ye. N., Gal'perr, G. D.

TITLE: On the Reduction of Sulfoxides

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3033-3036
(USSR)

ABSTRACT: In the separation of the sulfides from petroleum distillates as sulfoxides (Ref 1) the authors had to find a uniform preparative method of regeneration of the sulfides from sulfoxides, which is of general interest but had hitherto not been dealt with in publications. Previous reduction experiments of dibenzyl sulfoxide with zinc dust in acetic acid medium failed; dibenzyl sulfide is formed in low yields in a mixture of acetic- and hydrochloric acid. From the publications it may be seen that various other methods of reducing sulfoxides are not suited (Refs 2-11). In the preceding paper the sulfoxides were reduced 1) with hydriodic acid, 2) with aluminum lithium hydride. D. Jerchel, L. Dippelhofer, D. Renner showed that dialkyl sulfoxides with long chains may be qualitatively determined by the reduction with potassium iodide in acid medium. This method may, however, not be used for a quantitative determination of the sulfoxides (Ref 13). In this case

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On the Reduction of Sulfoxides

it was found, however, that the effect of hydriodic acid may be used in the preparative reduction method of sulfoxides to sulfides. In the reaction of diisoamyl-, dibenzyl-, diphenyl-, 3-methyl-1-thiaindane sulfoxide with potassium iodide in hydrochloric-acetic acid medium the corresponding sulfides are formed in rather good yields. The separation of iodine in this reaction may serve as qualitative reaction to the sulfoxides. The presence of sulfides and aromatic hydrocarbons in this case has no disturbing effect; only in the presence of oxidizing agents which are capable of separating iodine from potassium iodide and from compounds which easily link iodine such as phenols, unsaturated hydrocarbons etc this determination cannot be carried out. According to F. Braun (Ref 14) the aluminum lithium hydride was used as reducing agent of diisoamyl-, dibenzyl-, diphenyl-, 3-methyl-1-thiaindane sulfoxide in ether-benzene solution with the corresponding sulfides resulting smoothly. The latter reduction method is to be preferred to that with hydriodic acid since this acid may iodinate the reaction products. The reduction of the sulfoxides with aluminum lithium hydride is not complete; however, the sulfoxide which at first did not com-

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S07/79-29-9-48/76

. On the Reduction of Sulfoxides

pletely enter the reaction may be successfully reduced once more. There are 18 references, 5 of which are Soviet.

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Petroleum Institute of the Academy of Sciences USSR)

SUBMITTED: August 6, 1958

Card 3/3

5(3)

AUTHORS:

Karaulova, Ye. N., Gal'pern, G. D.

SOV/20-124-3-25/67

TITLE:

An Oxidation Method for Separation of Sulfides From the Medium Fraction of Petroleum (Okislitel'nyy metod vydeleniya sul'fidov iz srednikh fraktsiy nefi)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 3, pp 583-585 (USSR)

ABSTRACT:

Luk'yanitsa and Gal'pern (Ref 1) have found that the oxidation potential of organic sulfides into sulfoxides differs markedly from that of the oxidation of hydrocarbons and of sulfur compounds in other groups. Consequently, there is a possibility of a selective oxidation of the sulfides in the medium petroleum fraction. By an addition of glacial acetic acid and hydrogen superoxide it is possible to transform the sulfides quantitatively into sulfoxides without affecting the hydrocarbons themselves or the compounds of the thiophene series. The resulting sulfoxides are washed out with water, the extract is concentrated in the vacuum and treated with chloroform. The chloroform extract is dried by means of calcium chloride and chromatographed on silica gel. From the silica gel the sulfoxides are re-extracted by means of petroleum ether, benzene,

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SOV/26-124-3-25/67

An Oxidation Method for Separation of Sulfides From the Medium Fraction of Petroleum

chloroform, and alcohol. The elementary analysis of the sulf-oxides yields the general formulae $C_n H_{2n-2} S$, $C_n H_{2n-4} S$ and $C_n H_{2n} S$. Their constitution has not yet been investigated. -

The oxidation method proposed is of importance for Diesel oil and medium petroleum distillates, as the sulfur is contained mainly in the form of sulfides, whereas the hydrocarbons consist of difficultly oxidizable compounds. There are 3 tables and 5 Soviet references.

ASSOCIATION: Institut nefiti Akademii nauk SSSR (Petroleum Institute of the Academy of Sciences, USSR)

PRESENTED: July 29, 1958, by A. V. Topchiyev, Academician

SUBMITTED: July 29, 1958

Card 2/2

LEVENSON, Viktor Emmanuilovich; GAL'PERN, G.D., doktor khim.nauk,
otv.red.; KOTLYAREVSKAYA, P.S., red.izd-va; KOVAL'SKAYA,
I.F., tekhn.red.

[Geochemical bituminology and its problems] Geokhimicheskaia
bituminologiya i ee problemy. Moskva, Izd-vo Akad.nauk SSSR.
Vol.1. 1960. 191 p. (MIRA 13:11)
(Bitumen)

PHASE I BOOK EXPLOITATION SOV/A350
Soveshchaniye po khimii, tekhnologii i primeneniyu proizvozhnykh
pyridina i khinolina. Riga, 1957

Khimiya, tekhnologiya i primeneniye proizvozhnykh pyridina i
khinolina; materialy soveshchaniya (Chemistry, Technology
and Utilization of Pyridine and Quinoline Derivatives;
Materials of the Conference) Riga, Izd-vo AN Latvyskoy
SSR, 1960. 299 p. Errata slip inserted. 1,000 copies
printed.

Sponsoring Agencies: Akademiya nauk Latvyskoy SSR. Institut
khimii; Vsesoyuznoye khimicheskoye obshchestvo.

Ed.: S. Bazhanova; Tech. Ed.: A. Klyavinyai; Editorial
Board: Yu. A. Bankovskiy, Candidate of Chemistry, E. V.
Vasaga, Candidate of Chemistry (Resp. Ed.), L. P. Zalukayev,
Doctor of Chemistry, and M. M. Kalyn.

PURPOSE: This book is intended for organic chemists and
chemical engineers.

COVERAGE: The collection contains 31 articles on methods
of synthesizing or producing pyridine, quinoline, and
their derivatives from natural sources. No personalities
are mentioned. Figures, tables, and references accompany
the articles.

TABLE OF CONTENTS:

I. PYRIDINE AND QUINOLINE DERIVATIVES OBTAINED FROM THE THERMAL CRACKING PRODUCTS OF PEELS

Seleznev, M. M. (Muzne-fakul'skiy gosudarstvennyy politekhnicheskii universitet (Muznyy Tekh. State Polytechnical Institute)).
Quinoline Bases Obtained From Coal Tar

Dubrov, A. D. (Vostochnosibirskiy filial Akademii nauk SSSR
(East Siberian Branch of the Academy of Sciences USSR)). Ex-
traction and Utilization of Nitrogenous Tar Bases From the
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Kuznetsov, V. I. and A. P. Padyayeva (Institut teplo-
energetiki Khimicheskoy nauki USSR (Heat Power Engineering
Institute of the Academy of Sciences USSR)). Ex-
traction of Pyridine Bases in Pure Form From the Thermal
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Pedotova, L. A. and G. Ya. Yanis (Institut khimii
Akademii nauk Latvyskoy SSR (Chemical Institute of the
Academy of Sciences Latvian SSR)). Pyridine Bases From
Sapropelite Tar

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Reinert, V. N., G. D. Gilyarov, and A. A. Savat'yanskaya
(Institut nesti khlodnykh (Institute of Petroleum Institute of
the Academy of Sciences USSR)). Methods of Determination
and the Characteristics of Total Nitrogen and Nitrogenous
Bases in Petroleum

55

Kozlov, V. A. (Institut doryuchikh iskopayemykh Akademii
nauk USSR (Institute for Mineral Fuels of the Academy of
Sciences USSR)). Extraction of the β -Picoline Fraction of
Tar by the Selective Extraction Method

69

Politskiy, A. and S. Malyanovskiy (Fizicheskaya khimicheskaya
Institut of the Polish Academy of Sciences; Institute for
General Chemistry (Warsaw)). Physicochemical Studies in
Pyridine Bases From Products of the Chemical Processing of
Coal

75

GAL'PERN, G.D., doktor khimicheskikh nauk

~~From~~ the publisher. Metod.anal.org.sred.nefti,ikh smes.i
proizv. no.1:3-5 '60. (MIRA 14:8)
(Petroleum--Analysis)

LUK'YANITSA, V.G.; KARAULOVA, Ye.N.; GAL'FERN, G.D., doktor khimicheskikh
nauk

Study of sulfur compounds of petroleum in the Soviet Union.
Metod.anal.org.soed.nefti,ikh smes. i proizvod. no.1:6-20 '60.
(MIRA 14:8)

(Petroleum—Analysis) (Sulfur organic compounds)

CHUDAKOVA, I.K.; GAL'PERN, G.D., doktor khimicheskikh nauk; VOLYNSKIY,
N.P.

Micro- and semi-microdetermination of sulfur in organic compounds,
crude oils, and petroleum products. Metod.anal.org.sved.nefti,
ikh smes. i proizv. no.1:21-57 '60. (MIRA 14:8)
(Sulfur--Analysis) (Sulfur organic compounds)
(Petroleum products)

GAL'PERN, G.D., doktor khimicheskikh nauk; GIRINA, G.I.; LUK'YANITSA.
V.G.

Iodometric potentiometric determination of sulfide sulfur.
Metod.anal.org.sned.nefti,ikh smes. i proizv. no.1:58-73
'60. (MIRA 14:8)
(Sulfur--Analysis) (Sulfides) (Potentiometric analysis)

KARAULOVA, Ye.N.; GAL'PERN, G.D., doktor khimicheskikh nauk

Separation of sulfides in a form of sulfoxides from concentrates of sulfur compounds and aromatic hydrocarbons in intermediate petroleum fractions (preliminary methods). Metod.anal.org.soed. nefti,ikh smes. i proiz. no.1:10-106 '60. (MIRA 14:8)
(Sulfoxides)

CHUDAKOVA, I.K.; GAL'PERN, G.D., doktor khimicheskikh nauk; VOLYNSKIY,
N.P.

Micro-and semi-microdetermination of chlorine, bromine, and
iodine and simultaneous determination of sulfur and halogen
(chlorine or bromine) from the same batch, in organic compounds
and their mixtures. Metod.anal.org.soed.nefti,ikh smes. i
proizv. no.1:107-131 '60. (MIRA 14:8)
(Halogen compounds) (Sulfur--Analysis)

BEZINGER, N.N.; GAL'PERN, G.D., doktor khimicheskikh nauk; OVECHKINA,
T.I.

Determination of nitrogen in crude oils and petroleum products
by the Dumas micromethod. Metod.anal.org.soad.nefti,ikh smes.
i proizv. no.1:132-140 '60. (MIRA 14:8)
(Nitrogen--Analysis) (Petroleum products)

KARAULOVA, Ye.N.; MEYLANOVA, D.Sh.; MAL'PERN, G.D.

Synthesis of methyl-L-thiainlanes. Khim.sera-i azotorg.sod.sod.v نفت.
i nefteprod. 3:25-33 '60. (MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Benzothioiphenè)

LUK'YANITSA, V.G.; GAL'PERN, G.D.

Polarographic determination of free sulfur in petroleum products.

Khim.sera-i azotorg.sod.v neft.i nefteprod. 3:121-129. '60.

(MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR.

(Petroleum products) (Sulfur Analysis)

GAL'PERN, G.D.; GIRINA, G.P.; LUK'YANITSA, V.G.

Refinement of the iodometric potentiometric method for determining organic sulfides. Khim.sera-i azotorg.soed. sod.v neft.i nefteprod. 3:131-138 '60. (MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Sulfide) (Potentiometric analysis)

11.1265
11.1240
5.3300

31894
S/081/62/000/003/075/090
B171/B101

AUTHORS: Bezinger, N. N., Gal'pern, G. D.

TITLE: Development of methods for characterizing basic and neutral nitrogen-organic compounds contained in petroleum

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 495, abstract 3M239 (Sb. "Khimiya sera- i azotorgan. soyedineniy, soderzhashchikhsya v neft'yakh i nefteproduktakh". v. 3. Ufa, 1960, 139-148)

TEXT: A plan was worked out for a group analysis of nitrogen compounds (N. C.) contained in petroleum using the LiAlH_4 method of petroleum

reduction (RZhKhim., 1961, 12M243). By the plan 3 groups of N. C. are distinguished: (1) free bases; (2) neutral N. C., reduceable by LiAlH_4 , which are basically amides of acids; (3) residual N. C. including pyrroles, indoles, carbazoles and their complex derivatives. Each of the first two groups is subdivided in 3 subgroups: primary, secondary and tertiary amine- or amide groups. The free bases can also be again

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Development of methods for ...

S/081/62/000/003/075/090
B171/B101

subdivided into saturated and unsaturated N. C. by potentiometric titration in acetonitrile or in a mixture of acetonitrile and of dioxane medium. Analyses of petroleum according to the proposed plan are given in the article. It has been found that in the free bases group only the tertiary amines are present and that the LiAlH_4 reduction gives principally tertiary amines and only a small quantity of secondary and primary amines. [Abstracter's note: Complete translation.]

Card 2/2

GAL'PERN, G.D.; KARICHEVA, V.N.; NEKRASOV, A.S.

Selection of adsorbents for the chromatographic separation of
concentrates of sulfur compounds and aromatic hydrocarbons. Khim.
sera-i azotorg.sod.sod.v neft.i nefteprod. 3:219-226 '60.

(MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR.

(Adsorbents) (Sulfur organic compounds) (Hydrocarbons)

KARAULOVA, Ye.N.; GAL'PERN, G.D.

Separation of concentrates of sulfur compounds and aromatic hydrocarbons by selective oxidation and chromatography, following the example of the 175-300° fraction of Romashkino oils. Khim.sere-i azotorg.sod.v neft.i nefteprod 3:227-239 160. (MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Sulfoxide) (Hydrocarbons)

EX-100-100

5(3), 15(3), 15(5)

AUTHORS: Zupolov, A. V., Lomskaya, N. I., 1959
Mukhar, I. A., Ishakova, E. Kh., Sardashevskii, E. M.,
Kisilov, A. M., Gal'pern, G. D.

TITLE: Investigation of the Individual Hydrocarbon Composition of
Benzines Obtained From the Cracking of High-Quality Surahany
Petroleum

PERIODICAL: Doklady Akademii nauk USSR, 1960, Vol 130, Nr 6, pp 1267 - 1269
(USSR)

ABSTRACT: The authors of the present paper submitted the benzines they
had investigated previously (Ref. 1) for further investigation.
B-12 (obtained by catalytic cracking of the petroleum gas oil
fraction), B-2 (obtained by thermal cracking of fuel oil), and
B-11 (obtained by the thermal cracking of the petroleum gas
oil fraction). In the fraction up to 60°, the individual hydro-
carbons (Table 2) were investigated in these benzines; in the
fractions 60-175° the aromatic hydrocarbons (Table 1). Table 3
contains data of the fractions up to 60°. The latter contain in
each of the 3 benzines up to 30 individual hydrocarbons; a.g.,
in B-12 (in %): 2-methyl-butane 36.4; 2-methyl-butene-2 15.1;

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2-methyl-pentane 8.6; n-butene (1- and 2-together 6.3);
n-butane 3.6; n-pentane 25.0; 2-methyl-butane
11.1; 2-methyl-butene-1 7.3; 2-methyl-pentene-1 1.0; 2-methyl-
pentene-2 1.0; 2-methyl-pentene-3 1.0; 2-methyl-pentene-4 1.0; 2-methyl-
pentene-5 1.0; 4-methyl-pentene-1 12.0; 2-methyl-butene-2 10.0;
pentene-1 7.1; 2-methyl-butane 7.4; cyclopentane 7.2. The in-
fluence of the processing method upon benzines from the same
raw material is expressed by the different content of radi-
cally aromatic hydrocarbons. The fractions up to 60° may well be re-
garded as a possible raw material for the petroleum-chemical
synthesis. Table 1 shows that the total yield in aromatic
hydrocarbons from B-12 is twice higher than that from B-11,
and 2.5 times higher than that from B-2. The most important
hydrocarbons in these benzines are: n-butane (21.6% in B-12),
hydrocarbons, 8.2% of the benzene fraction up to 175°;
toluene (18 and 5.4%), n-xylene (14 and 2%), ethylbenzene
(10 and 3%), in B-11 toluene (30 and 4.6%), benzene (16 and
2.6%), n-xylene (9 and 1.4%), ethylbenzene 9% in B-2;
n-xylene (17 and 1.0%), toluene (14 and 0.9%), p-xylene (13

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and 0.67%), ethylbenzene (11 and 0.23%). G. M. Buturlova and
G. S. Zentovskaya took part in the experiments. There are
3 tables and 3 Soviet references.

SUBMITTED: August 2, 1959

Card 3/3

ABDURAKHMANOV, M.A.; BEZINGER, N.N.; GAL'PERN, G.D.

Determination of sulfide sulfur in solutions containing sulfur-nitrogen compounds. Nature of the sulfur in extracts of petroleum bases. Uzb. khim. zhur. no.1:77-79 '61. (MIRA 14:1)

1. Institut neftekhimicheskogo sinteza AN SSSR i Institut khimii AN UzSSR.

(Sulfur--Analysis)

(Sulfide)

TOPCHIEV, A.V.; MUSAYEV, I.A.; ISAKHAKOVA, E.Kh.; SARDANASHVILI, N.M.;
KISLINSKIY, A.N.; GAL'PERN, G.D.

Chemical composition of gasolines obtained from the cracking of
naphenic feed stocks. Report No.2: Individual hydrocarbon compo-
sition of cracking gasolines from Surakhan selective crudes.
Izv. AN SSSR. Otd. khim. nauk no.2:302-306 F '61. (MIRA 14:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Gasoline) (Petroleum products)

KARAULOVA, Ye.N.; GAL'PERN, G.D.

Separation of sulfoxides from oxidized sulfur-containing
aromatic concentrates. Neftekhimia 1 no.3:335-338 My-Je '61.
(MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

53620

31745
S/204/61/001/004/002/005
E075/E185

AUTHORS: Volynskiy, N.P., Gal'pern, G.D., and Smolyaninov, V.V.

TITLE: Preparation of sulphides and sulphoxides by the
action of thionyl chloride on mixed organomagnesium
compounds

PERIODICAL: Neftekhimiya, v.1, no.4, 1961, 473-481

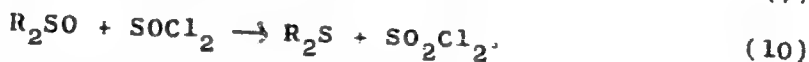
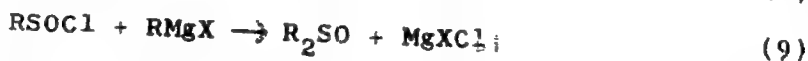
TEXT: A number of sulphides and sulphoxides were prepared in connection with investigations of sulphur compounds of middle fractions of petroleum. The action of thionyl chloride on organomagnesium compounds was studied as a method of preparation of sulphides and sulphoxides. The reactions with the following organomagnesium compounds were studied: isoamyl-, phenyl-, cyclohexyl-, and α -naphthylmagnesium bromide and, also, decylmagnesium chloride. In this way the sulphides were prepared bypassing the stage of mercaptan formation. More detailed study of the reaction with isoamyl- and phenylmagnesium bromide showed that increase in the ratio of moles of thionyl chloride and the magnesium bromide compound from 1:3 to 1:1 leads to an increase

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of yields of the sulphides and a decrease of yields of the corresponding sulphoxides. In the experiments in which the reagents were added in the reverse order (ethereal solution of isoamylmagnesium bromide added to ethereal solution of thionyl chloride) diisoamyl sulphide was obtained in place of sulphoxide. The formation of sulphoxide took place when there was no excess of thionyl chloride, or at low temperatures with efficient stirring of the reaction mixture. From the study of the reaction it is concluded that the synthesis of sulphides proceeds in three stages as follows:



It was shown that the organomagnesium compounds do not react with the sulphoxides not only under the conditions of the synthesis of the sulphides (0 to -10 °C), but also at room temperature.

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On the other hand it was shown that sulfoxides, in contrast to anhydrides of chlorosulphurous acids, can be converted very easily with thionyl chloride to sulphides, the speed of conversion of dicyclohexylsulphoxide considerably exceeding that of diphenylsulphoxide. Depending on the conditions of the conversion of thionyl chloride various quantities of chlorine containing products were formed, but were not studied in this work. By reacting thionyl chloride with a mixture of two organomagnesium compounds with different organic radicals a number of mixed sulphates were obtained; decylcyclohexyl-, phenyl- α -naphthyl- and cyclohexyl- α -naphthylsulphides. In addition didecylsulphide was obtained from decylchloride and dia-naphthylsulphoxide from α -bromonaphthalene. It was not possible to convert dia-naphthylsulphoxide into the corresponding sulphide by the reaction with thionyl chloride. Diisoamyl-, didecyl- and dicyclohexylsulphide were oxidized under standard conditions with hydrogen peroxide to the corresponding sulfoxides. There are 1 table and 24 references; 8 Soviet-bloc and 16 non-Soviet-bloc. The four most recent English language references read as follows:

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Preparation of sulphides and ...

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Ref.14: B.S. Wildi, T.W. Taylor, H.A. Potratz, J. Amer. Chem. Soc.,
v.73, 1965, 1951; C.A., v.46, 1482.

Ref.16: F.G. Bordwell, B.M. Pitt. J. Amer. Chem. Soc., v.77,
5727, 1955.

Ref.19: W. Davey, E.D. Edwards. Wear, I, 291, 1957. C.A., v.52,
15040.

Ref.21: M.S. Kharasch, A.F. Zavist. J. Amer. Chem. Soc., v.73,
964, 1951; C.A., v.45, 7950.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR
(Institute of Petrochemical Synthesis, AS USSR)

SUBMITTED: June 21, 1961

Card 4/4

S/081/61/000/012/027/028
B103/B202

AUTHORS: Bezinger, N. N., Gal'pern, G. D.

TITLE: Functional analysis of the nitrogenous bases and amines and group analysis of the nitrogenous petroleum compounds

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1961, 533, abstract 12M243. (Metody analiza organ. soyedineniy nefti, ikh smesey i proizvodnykh. I. M., AN SSSR, 1960, 141-169)

TEXT: The authors devised a group analysis of the nitrogenous petroleum compounds (NC) which permits classification of these compounds into the following three groups: 1) free bases; 2) neutral NC (mainly amides and nitrides) which are reduced to bases by means of LiAlH_4 ; 3) neutral NC which cannot be reduced to bases by means of LiAlH_4 . The content of free bases is determined by potentiometric titration of the petroleum solution (or of the petroleum product) in the mixture $\text{CH}_3\text{COOH} + \text{C}_6\text{H}_5\text{Cl}$ (usual ratio of the weighed portion: $\text{CH}_3\text{COOH} : \text{C}_6\text{H}_5\text{Cl}$, 1 : 1 : 1) with HClO_4 . To determine the

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Functional analysis of the nitrogenous ...

S/081/6/000/012/027/028
B:03/B202

total content of NC of the first and second group the weighed portion of petroleum (50-60 g) is reduced with LiAlH_4 by the method of Fingold (J. Am. Chem. Soc., 1947, 69, 1199). Subsequently, the content of free bases is determined. The NC content of the third group is determined as the difference between the total N content (on the basis of elementary analysis) and the N content of NC of the first and second group. The NC of the first and second group are divided into three subgroups: primary, secondary, and tertiary amines by treating the weighed portions of the petroleum and of the reduced petroleum with: 1) phthalic anhydride which forms neutral phthalimides with the primary amines, and with subsequent potentiometric titration of the remaining bases with HClO_4 ; 2) acetic anhydride which forms neutral compounds with primary and secondary amines, and with subsequent potentiometric titration of the remaining bases with HClO_4 . The authors mention a group analysis of the NC of 12 petroleums of the USSR and 8 products (resins and their fractions) of coal and peat processing. The maximum NC content was found in the petroleum of the Okha deposit (referred to petroleum in %): total 0.39, first group 0.173 (only tertiary amines), second group 0.172, among them such from which the following products were

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obtained by reduction: primary amines 0.014, secondary amines 0.019, and tertiary amines 0.139. Furthermore, a method was suggested for the differential determination of the sum: aliphatic amines + hydrated nitrogenous bases, and the sum: aromatic amines + unsaturated heterocyclic bases, by potentiometric titration of the solution of the NC mixture in dioxane or in dioxane + acetonitrile with HClO_4 . 40 references.

[Abstracter's note: Complete translation.]

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BEZINGER, N.N.; ABDURAKHMANOV, M.A.; GAL'PERN, G.D.

Nitrogen compounds of petroleum. Report No.1. Nature of neutral
nitrogen compounds. Neftekhimiia 1 no.1:23-28 Ja-F '61..

(MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Nitrogen compounds) (Petroleum)

BEZINGER, N.N.; ABDURAKHMANOV, M.A.; GAL'PERN, G.D.

Nitrogen compounds of petroleum. Report No.2. Separation of
nitrogenous bases of petroleum from organic sulfides. Neft-
ekhimiia 1 no.2:149-155 Mr-Apr '61. (MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Nitrogen compounds)
(Petroleum) (Sulfides)

KARAULOVA, Ye.N.; SMIRNOV, B.A.; GAL'PERN, G.D.

Investigation of sulfides from the kerosene of the Romashkino
oil field. Neftekhimia 1 no.3:339-349 My-Je '61.

(MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

VOLYNSKIY, N.P.; GAL'PERN, G.D.; SMOLYANINOV, V.V.

Obtaining of sulfides and sulfoxides by the action of
thionyl chloride on mixed organomagnesium compounds. Nefte-
khimiia 1 no.4:473-481 J1-Ag '61. (MIRA 16:11)

1. Institut neftekhimicheskogo sinteza AN SSSR.

BEZINGER, N.N.; ABDURAKHMANOV, M.A.; GAL'PERN, G.D.

Nitrogen compounds of petroleum. Part 3: Neutral nitrogen compounds
of Sakhalin oil of the Ekhabi field. Neftekhimiia 1 no.5:583-588
S-O '61. (MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Ekhabi region—Petroleum—Analysis)(Nitrogen compounds)

BEZINGER, N.N.; ABDURAKHMANOV, M.A.; GAL'PERN, G.D.

Nitrogen compounds of petroleum. Part 4: Group separation of
concentrates of nitrogen bases. Neftekhimiia 1 no.5:589-598
S-O '61. (MIRA 15:2)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Petroleum—Analysis)(Nitrogen compounds)(Bases(Chemistry))

S/204/61/001/006/004/004
E075/E436

AUTHOR: Gal'pern, G.D.

TITLE: Sixth Scientific Session on the Chemistry of Organic Sulphur Compounds in Petroleum and Petroleum Products

PERIODICAL: Neftekhimiya, v.1, no.6, 1961, 839-842

TEXT: On the initiative of the Scientific Council a session on "Chemistry and Technology of Sulphur Containing Crudes and Organic Sulphur Compounds" was convened in Ufa from June 27 to July 1, 1961. The session was attended by 310 representatives from 65 academic establishments, industrial institutes, higher scientific institutions and industrial concerns. The 95 papers presented and discussed at the session dealt with the following problems: 1) Economics of use of sulphur containing crudes (8 papers). 2) Methods and technological processes of treatment of sulphur- and high-sulphur-containing crudes (17 papers). 3) Operational characteristics of sulphur containing crudes (20 papers). 4) Synthesis and properties of sulphur containing compounds (15 papers). 5) Use of organic sulphur compounds (5 papers). 6) Catalytic transformation of organic sulphur

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compounds (5 papers). 7) Influence of organic sulphur compounds in the organism (3 papers). 8) Composition and qualities of organic sulphur compounds of crudes and oil products (21 papers). S.Z.Tayts (IOKh AN SSSR) reported on the synthesis of aminoacids based on thiophene, carried out under the direction of Ya.L.Gol'dfarb. A.N.Sorokin, Kuybyshevskiy aviatsionnyy institut (Kuybyshev Aviation Institute) investigated the reaction of diazotization of the thiophene series. Ye.N.Prilezhayeva and co-workers (IOKh AN SSSR) reported on the syntheses based on α -, β - unsaturated sulphones and sulfoxides carried out in the laboratory directed by M.F.Shostakovskiy during 1959-1961. S.V.Zhuravlev and co-workers from the institut farmakologii i khimioterapii AMN SSSR (Institute of Pharmacology and Chemotherapy AMS USSR) described the synthesis of a large number of phenothiazene derivatives. Sh.Mamedov and A.A.Mamedov, Institut neftekhimicheskikh protsessov AN AzSSR (Institute of Petrochemical Processes AS AzSSR) reported on the synthesis and properties of a series of alkoxy-derivatives of thioglycols and their methyl ethers. P.D.Obolentsev, N.G.Mar'ina and L.V.Vafina of the Card 2/7

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IOKh Bashkirskogo filiala AN SSSR (IOKh Bashkir Branch AS USSR) reported on the preparation of three symmetrical dialkylsulphides, four phenylalkylsulphides, thiophane, 2-hexyl thiophene, thiophene, 2-octylthiophene and three symmetrical dialkyldisulphides. N.P.Volynskiy, G.D.Gal'pern and V.V.Smolyaninov (INKhS AN SSSR) reported on the synthesis of sulphides and sulphoxides from organic magnesium compounds and thionylchloride. R.D.Obolentsev and N.S.Lyubopytov (IOKh Bashkir Branch AS USSR) reported on the near ultraviolet absorption spectra of a number of sulphur compounds. V.I.Khvostenko and A.Sh.Sultanov (IOKh Bashkirian Branch AS USSR) obtained mass-spectra of 2,5-dialkylthiophanes on a modified mass spectrometer MC-2M (MS-2M). Yu.A.El'tekov and V.N.Semenova of the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR) dealt with the selective adsorption of thiophene and n-heptane mixtures on silica gel, alumina and zeolite 5-A. R.D.Obolentsev and Yu.Ye.Nikitina (IOKh Bashkir Branch AS USSR) reported on the possibility of preparation of thiophenes with radioactive sulphur by isotopic exchange. Ye.N.Gur'yanova and co-workers (NIFKhI Card 3/7

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im. L.Ya.Karpova) developed a method of dielcometric titration and used it for the investigation of complex formation between SnCl_4 and organic sulphur compounds. R.D.Obolentsev and N.K.Fayzulina (IOKh Bashkir Branch AS USSR) investigated equilibrium concentrations and thermochemical characteristics of the interaction of sulphide solutions in n-octane with aqueous mercuric acetate solutions. T.A.Danilova, I.N.Tits-Skvortsova and I.Nasyrova (MUG im. Lomonosov) investigated the interaction between mercuric acetate and mercaptans, sulphides and disulphides. V.N.Dronov and co-workers (IOKh Bashkir Branch AS USSR) described the synthesis of a series of sulphones, derivatives of dialkyl- and alkylaryl-sulphides, thiophane and alkylthiophanes. A.V.Mashkina and co-workers of the In-t kataliza SO AN SSSR (Institute of Catalysis SB AS USSR) described the catalytic hydrogenation of sulpholene and dehydration of sulphonene. R.D.Obolentsev and L.N.Gabdulina (IOKh Bashkir Branch AS USSR) investigated the influence of the presence of hydrocarbons on the conversion of diisobutylsulphide on alumino-silicate catalyst. R.D.Obolentsev and co-workers
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(Bashkir Branch AS USSR) continued with the investigation of kinetics of catalytic hydrogenation of organic divalent sulphur compounds. B.V.Ayvazov of the Bashkirskiy Gos. un-t (Bashkir State University) submitted a classification of crudes into three groups according to the quantity of H_2S and mercaptan sulphur evolving from crudes heated and blown under standardized conditions. R.D.Obolentsev and co-workers (IOKh Bashkir Branch AS USSR) investigated the group-composition of sulphur compounds contained in sour crudes from Bashkirskaya and Tatarskaya ASSR. R.A.Virobyants and co-workers from IOKh Kazanskogo filiala AN SSSR (IOKh Kazan' Branch AS USSR) investigated C₅-C₂₅ fractions of Devon petroleum of TatASSR. Ye.I.Skrypnik and co-workers of the Kuybyshevskiy industrialnyy in-t im V.V.Kuybysheva (Kuybyshev Industrial Institute im. V.V.Kuybyshev) obtained a sulphuro-aromatic concentrate from diesel oil fractions of Sernovodskoye crude. G.F.Bol'shakov and Ye.A.Glebovskaya (VATiT) investigated the nature of organic sulphur compounds from kerosene and gas oil fractions by infrared spectrometry in the region of 15 to 20 microns. Ye.N.Karaulova

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B.A.Smirnova and G.D.Gal'perna (INKhS AS USSR), devoted their work to the study of detailed structure of sulphides in C₁₃-C₁₆ kerosene fraction of Romashkino crude. B.B.Krol' and Z.I.Rozanova (VNII NP) investigated the higher molecular weight organic sulphur compounds from the phenol extract of transformer oil distillate from Tuymazy crude. O.G.Eyzen, S.A.Rang and Yu.T.Rikken of the In-t khimii AN EstSSR (Institute of Chemistry AS EstSSR) reported on the investigation of the composition of organic sulphur compounds from shale benzene. I.V. Veretnikova and A.A.Petrov of Giprovostokneft' reported on the organic sulphur compounds from Kashpir shale resin. I.U.Numanov of the In-t khimii AN TadzhSSR (Institute of Chemistry AS TadzhSSR) described the investigation of sulphur- and nitrogen-organic compounds present in crudes from the south of Central Asia. L.S.Gusinskaya of the Tashkentskiy gos. un-t im. V.I.Lenina (Tashkent State University imeni V.I.Lenin) reported on the separation (through mercurates) of 2-phenyldimethylthiazole and 2,4-diethylthiazole from a south Uzbekistan crude. N.N.Bezinger, M.A.Abdurakhmanov and G.D.Gal'pern dealt with the nature of

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nitrogen bases and neutral nitrogen compounds in petroleum. A.A.Ratovskaya and M.D.Gavrilova (IOKh Bashkir Branch AS USSR) reported on the application of a differential oscillographic polarograph for the determination of corrosive sulphur in petroleum products. M.A.Korshunov (NIIMSK, Yaroslavl) reported on the development of technical synthesis of dodecylmercaptan. B.A.Grigorovich described the application of tertiary dodecylmercaptan as a regulator of plasticity in the process of emulsion copolymerization of divinyl with styrol. The session recommended the publication of the proceedings of the Sixth Scientific Session in the form of the fifth volume of the collection "Chemistry of organic sulphur compounds in petroleum and petroleum products" not later than in the first half of 1962. It was decided to convene the Seventh Session on the Chemistry of Organic Sulphur Compounds in Petroleum and Petroleum Products in Ufa in the second half of 1962.

Card 7/7

BEZINGER, N.N.; GAL'PERN, G.D.; ABDURAKHMANOV, M.A.

Use of acetic anhydride as a differentiating solvent for a selective acidimetric titration of amines, sulfoxides, and amides. Zhur. anal. khim. 16 no. 1:91-95 Ja-F '61. (MIRA 14:2)

1. Institute of Petroleum Chemical Synthesis, Academy of Sciences, U.S.S.R., Moscow.
(Acetic anhydride) (Amines) (Sulfoxides) (Amides)

Karaulova, Ye.N.; MEYLANOVA, D.Sh.; GAL'PERN, G.D.

Synthesis of 2- and 3-alkyl-1-thiaindans. Zhur.ob.khim. 30 no.10:
3292-3297 0 '61. (MIRA 14:4)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Thiaindan)

DIMITROV, Khr.; GALPERN, G. D.; KISLINSKI, A.N.; IVANOV, V.

On the chemical composition of the benzine obtained through the
coking of the asphalt of the Tyulenovo naphthene aromatic naphtha.
II. Individual composition of the fractions boiling in the interval
22-60°C, Godishnik khim 54 no.3:67-73 1959/60 (pub. '61)
(EEAI 10:9)

(Ligroine) (Asphalt) (Naphthenes)

LEVENSON, Viktor Emmanuilovich; GAL'PERN, G.D., doktor khim.nauk,
otv.red.; KOTLYAREVSKAYA, P.S., red.izd-va; YEPIFANOVA, L.V.,
tekhn.red.

[Geochemistry of bitumens and its problems] Geokhimicheskaya
bituminologiya i ee problemy. Moskva, Izd-vo Akad.nauk SSSR.
Vol.2. 1962. 171 p. (MIRA 15:5)
(Bitumen) (Geochemistry)

BEZINGER, N.N.; OVECHKINA, T.I.; GAL'PERN, G.D.

Determination of nitrogen in aromatic nitro- and polynitro
compounds by the Kjeldahl micromethod. Zhur.anal.khim. 17 no.8:1027-
1028 N '62. (MIRA 15:12)

1. Institute of Petroleum Chemical Synthesis, Academy of Sciences,
U.S.S.R., Moscow.

(Nitrogen—Analysis)

(Nitro compounds)

GALPERN, G.D.

MUSAYEV, I.A., ROSENBERG, L.M., NIFONTOVA, S.S., GALPERN, G.D.,
NECHITAYLO, N.A., TERENTIEVA, YE.M., KUSANOV, M.M., SANIN, P.I.

Investigating chemical composition of middle fractions of a
sulphurous crude oil in the USSR

Report to be submitted for the Sixth World Petroleum Congress,
Frankfurt, 16-26 June 63

NUMANOV, I.H.; GAL'PERIN, G.D.; KARIMOVA, Ya.N.; BESINGER, H.N.; SHAIKO,
V.P.; SKOBELINA, A.I.; SPICHKOVA, T.V.

Composition, properties, and methods of extraction of hetero-
atomic components from the petroleum of southern Central Asia.

Izv. AN Turk. SSR. Ser. fiz.-tekhn. i geol.nauk no.6:31-35

'63.

(MIRA 18:1)

1. Khimicheskiy institut AN Tadzhikskoy SSR.

OBOLENTSEV, R.D., prof., doktor khim. nauk, otv. red.; GAL'PERIN, G.D., doktor khim. nauk, red.; GUR'YANOVA, Ye.N., doktor khim. nauk, red.; MASHKINA, A.V., kand. khim. nauk, red.; PIVOVAROVA, T.Ye., kand. khim. nauk, red.; POZDEYEV, N.M., kand. fiz.-mat. nauk, red.; SOSKOVA, L.M., red. LEVINA, Ye.S., ved.red.

[Chemistry of the sulfur organic compounds in petroleum and petroleum products] Khimiia seraorganicheskikh soedinenii, sodержashchikhsia v neftiakh i nefteproduktakh. Moskva, Khimiia, 1964. 286 p. (MIRA 18:4)

1. Nauchnaya sessiya po khimii sera- i azotoorganicheskikh soyedineniy, sodержashchikhsya v neftyakh i nefteproduktakh. 7th, Ufa, 1963. 2. Institut organicheskoy khimii Bashkirskogo filiala AN SSSR (for Soskova, Obolentsev). 3. Fiziko-khimicheskiy institut im. L.Ya.Karpova (for Gur'yanova).
4. Institut neftekhimicheskogo sinteza AN SSSR (for Gal'perin).

LEVENSOR, Viktor Emmanuilovich; GAL'PERIN, G.D., doktor nauk.
nauk, otv. red.

[Geochemistry of bitumen and its problems] Geokhimicheskaya bituminologiya i ee problemy. Moskva, Nauka,
Vol.4. 1964. 171 p. (MIRA 18:2)

VOLYNSKIY, N.P.; GAL'PERN, G.D.; SMOLYANINOV, V.V.

Obtaining alkyl (aryl)-naphthyl sulfides by the action of thionyl chloride on mixed organo-magnesium compounds. Neftekhimi. 4
no.3:370-373 My-Je '64. (MIRA 18:2)

1. Institut neftekhimicheskogo sinteza AN SSSR im. A.V.Topchiyeva.

GAI-PERNI, G.D.; CHUDAKOVA, I.K.; YEGORUSHKINA, M.V.

Direct microdetermination of oxygen in organic compounds,
Zhur. anal. khim. 19 no.5:598-606 '64. (MIRA 17:8)

1. Institut neftekhimicheskogo sinteza imeni A.V. Topchiyeva
AN SSSR, Moskva.

GAL'PERN, G.D.; BEZINGER, N.N.

Reply to the remarks by E.IV. Khmel'nitskaia and E.A. Gribova
concerning the article by G.D. Gal'pern and N.N. Bezinger.
Zhur. anal. khim. 19 no.11:1418 '64.

(MIRA 18:2)

GAL'PERN, G.D., doktor khim. nauk; PRILEZHAYEVA, Ye.N., doktor khim. nauk

International symposium on the chemistry of sulfur organic
compounds in Czechoslovakia. Vest. AN SSSR. 34 no.11:100
N '64. (MIRA 17:12)

5.3100

67218

SOV/58-59-7-16560

Translation from: Referativnyi Zhurnal Fizika, 1959, Nr 7, p 271 (USSR)

AUTHORS: Gal'perin, G.D., Kusakov, M.M., Pokrovskaya, Ye.S., Shimanko, N.A.

TITLE: Study of the Absorption Spectra of Some Cyclohexyl and Cyclopentyl Derivatives of Benzene in the Near Ultraviolet Region

PERIODICAL: Tr. In-ta nefti. AS USSR, 1958, Vol 12, pp 38 - 64

ABSTRACT: The authors studied the absorption spectra of a number of cyclohexyl and cyclopentyl derivatives of benzene and its methylated homologs in a solution of isooctane in the 2,200 to 2,900 Å region. They demonstrated the possibility of determining the position of alicyclic substitutes in the benzene ring. In some cases it is possible to identify isomers of identical structure with cyclohexyl, cyclopentyl, methyl, or both methyl and cyclic substitutes. The advantages of the described method of studying structure, as compared with the chemical method, are its simplicity, the possibility of carrying out measurements in the liquid phase and at room temperature, and the small size of the sample required for analysis (hundredths of a gram).

Card 1/1

L. Dmitrenko

OREKHOV, Aleksandr Pavlovich, akademik, [deceased]; KILIMINIZ,
M.I., akademik, otv. red.; YANOVLOV, D., prof., red.;
GAL'PERN, G.D., prof., red.; SIMUKOVA, H.A., red.

[Chemistry of the alkaloids of plants of the U.S.S.R.]
Khimiia alkaloidov rastenii SSSR. Moskva, Nauka, 1966.
391 p. (MIRA 18:11)

L 8184-66 EWT(m) RM

ACC NR: AP5026462

SOURCE CODE: UR/0204/65/005/005/0747/0752

AUTHOR: Gal'pern, G. D.; Karaulova, Ye. N.; Numanov, I. U.; Skobelina, A. I.; Chayko, V. P.

ORG: Institute of Petrochemical Synthesis im. A. V. Topchiyeva AN SSSR (Institut neftechimicheskogo sinteza AN SSSR)

TITLE: Isolation of sulfides from average petroleum fractions from the Khandag and Kyzyl-Tumshuk fields

SOURCE: Neftekhimiya, v. 5, no. 5, 1965, 747-752

TOPIC TAGS: petroleum, petroleum refining, petroleum product, organic sulfur compound, oxidation, solvent extraction

ABSTRACT: The nature of the organic sulfur compounds in the above central Asian petroleum was investigated. The method used for isolating sulfides - obtaining concentrates of the sulfur aromatics, selectively oxidizing with equivalent amounts of hydrogen peroxide, and chromatographic separation - was also found applicable to high sulfur petroleum. 71-75% of the sulfides present in the 150-350° fractions of the two petroleum studied were separated as sulfoxides. Elemental analysis indicated that these sulfoxides were mostly mixtures of mono- and bicyclic compounds of various structures. "Determination

Card 1/2

UDC: 665.51(575.4):665.547.932

L. 8184-66

ACC NR: AP5026462

of oxygen was conducted by ⁵⁵I. K. Chudakov and ⁵⁵M. V. Yegorushkin." ⁴Orig.
art. has: 4 tables.

SUB CODE: OC, FP, GC/ SUBM DATE: 11Nov64/ ORIG REF: 011/ OTH REF: 001

jw

Card 2/2

GAL'PERIN, G.D.; KOTLYAR, L.I.

Intensification of the grain milling process in a roller mill.

Izv. vys. ucheb. zav.; pishch. tekhn. no. 2:88-98 '61.

(MIRA 14:5)

1. Odesskiy tekhnologicheskii institut imeni I.V. Stalina.
Kafedra tekhnologicheskogo oborudovaniya.

(Grain milling)

GAL'PERIN, G.D.

Possibilities for using adjustable volume batchers in automatic flour packaging machines. Izv. vys. ucheb. zav.; pishch. tekhn. no.5:102-105 '61. (MIRA 15:1)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina. Kafedra tekhnologicheskogo oborudovaniya.
(Packaging machinery) (Flour)

GAL'PERIN, G.D.; PEYSAKHOVICH. A.I.

Need for improving the feed mechanisms for small roller mills.
Izv.vys.ucheb.zav.; pishch. tekhn. no.6:100-105 '61. (MIRA 15:2)

1. Odeskiy tekhnologicheskii institut, kafedra tekhnologicheskogo
oborudovaniya.

(Flour mills)

GAL'PERIN, G.D.

"Automatic packaging machines" by B.E.Broido. Reviewed by G.D.
Gal'perin. Izv.vys.ucheb.sav.; pishch.tekh. no.3:161-162 '62.
(Packaging machinery) (Broido, B.E.) (MIRA 15:7)

GAL'PERIN, G.D.; SUKHOY, L.A.

Possibility of reducing the dynamic stresses in the drive of
the continuous packaging and wrapping line of the APM automatic
machine. Izv.vys.ucheb.zav.; pishch.tekh. no.4:100-105 '62.
(MIRA 15:11)

1. Odesskiy tekhnologicheskii institut im. M.V.Lomonosova,
kafedra tekhnologicheskogo oborudovaniya.
(Assembly-line methods) (Packaging)

GAL'PERIN, G.D.; SHISHKOV, P.G.; PEYSAKHOVICH, A.I.; GOROBTSOV, A.M.

The BVS small-roller flour mill. Biul.tekh.-ekon.inform.Gos.nauch.-
issl.inst.nauch.i tekh.inform. no.11:74-76 '62. (MIRA 15:11)
(Flour mills)

GAL'PERIN, G.D.; PEYSAKHOVICH, A.I.

Comparison crushing of grain products by rolls with pulley and
roller feed mechanisms. Izv.vys.ucheb.zav.; pishch.tekh. no.11
103-107 '63. (MIRA 16:3)

1. Odesskiy tekhnologicheskii institut imeni Lomonosova, kafedra
tekhnologicheskogo oborudovaniya.
(Milling machinery)

KOTLYAR, L.I.; GAL'PERIN, G.D.; DUDAREV, I.R.; LEVIN, S.M.

Grain-processing machinery. Izv.vys.ucheb.zav.; pishch.tekh.
no.1:171-172 '64. (MIRA 17:4)

GAL'PERIN, G.L.; GOSPODINOV, G.V., red.; LMPESHINSKAYA, Ye.V., red.;
AKHLAMOV, S.N., tekhn.red.

[English-Russian dictionary on cartography, geodesy, and aerial
photogrammetry] Anglo-russkii slovar' po kartografii, geodesii
i aerofototopografii. Red. G.V.Gospodinov. Moskva, Gos.izd-vo
fiziko-matem.lit-ry, 1958. 546 p. (MIRA 12:5)

(English language--Dictionaries--Russian)

(Cartography--Dictionaries) (Geodesy--Dictionaries)

(Aerial photogrammetry--Dictionaries)

GAL'PERIN, Grigoriy L'vovich; KAGANOV, Il'ya Lipovich; KASHPANOV, F.,
red.; KALECHITS, G., tekhn.red.

[Make greater use of the potentialities of automotive transportation; from the practices of automotive unit No.12 of the Minsk City Motor Vehicle Trust] Shire ispol'sovat' rezervy avtotransporta; iz opyta raboty avtobazy No.12 Minskogo gorodskogo avtotresta. Minsk, Gos.izd-vo BSSR, Red. proizvodstvennoi lit-ry, 1960. 58 p.

(MIRA 14:3)

(Minsk--Transportation, Automotive)

GAL'PERIN, Georgiy L'vovich; POPOVA, V.I., red.; LOBANOVA, R.S.,
tekhn. red.

[The Republic of Togo] Respublika Togo. Moskva, Gos.izd-vo
geogr.lit-ry, 1961. 46 p. (MIRA 15:2)
(Togo)

GAL'PERIN, G.L.

Railroad transportation of Ghana, Guinea, the Cameroons,
the Congo, Nigeria and Togoland. Zhel.dor.transp. 42
no.7:82-86 J1 '60. (MIRA 13:7)
(Africa--Railroads)

FILE 1 BOOK INFORMATION

808/4413

International Comedy Day Conference, Moscow, 1999.

Proceedings. V. III. Moscow, 1950. 23 p. Extra slip inserted. No. of copies printed not given.

Sponsoring Agency: International Union of Pure and Applied Physics. Committee on Condensed Matter Physics.

Ref.: 1. I. Gromovskiy, *Ekstremal'nyi Dvuzhiv*, 9, 3, Zhukovskiy (Kl.-in-Chel'), L. P. Ivanovskiy (Kl.-in-Chel'), B. M. Gromovskiy, A. I. Nikolskiy, V. T. Bolotnik, B. A. Kuznetsov, L. I. Derman, V. P. Tikhonov, G. I. Gromovskiy, V. M. Petrovskiy, Yu. B. Pavlov, and A. T. Gromovskiy.

IMPORTANCE: This book is intended for physicists, astronomers and other scientists concerned with the earth's radiation belts and cosmic ray research.

REMARKS: This is Volume 3 of a 4-volume work containing the proceedings of the Moscow Cosmic Ray Conference held July 6-11, 1959. This volume contains 40 reports on cosmic-ray radiation belts and primary cosmic radiation. The reports delivered by Soviet scientists are abstracted below. References to other individual reports.

2. Physomys (Krauss), T.T. -- 3. ~~Sciomyz~~ (Mulsant), G.T.
Calyptra, and E.H. Swellens (Swellens). On Post-Copulations of
the Upper Anopheles
This material contains structural data on these anophelines as of the
1963

operator's manual and gives a detailed description of the equipment used in the experiment.

11. Formal. In A. On the Problem of the Nature of Soft Radiation in the Type A Alloys

these papers, the authors of the introduction and the volume of 1915 indicate in the atmosphere and investigate the nature of the bursts in relation to processes on the sun, in cosmical streams, and in the interplanetary medium. It also investigates the nature of these bursts in relation to the properties of the earth's belts of radiation.

12. Abstracts of, A. On the Nature of the External Induction Belt of the Arctic

It is noted that the external radiation belt encircling the earth is of nuclear origin, but that the explanation of the capture and accumulation of particles by the Earth's magnetic field in the course of its local variations are not contradictory as an explanation of the nature of the external radiation belt. A more convincing explanation of the observed effects is given in this paper.

II. MODAL COHERENT RADIATION

2. Chavchavadze, A.S., and S.N. Chavchavadze (Lebedev Physical Institute, USSR Academy of Sciences, Soviet Physics Research Institute, Moscow University). *Energy Spectrum of Primary Cosmic Particles*. This paper explains the results obtained from interest.

gations of the elastic component of stress relaxation in the upper layers of the atmosphere.

23. Kocharyan, H. N., G. S. Smolyan, and Z. A. Izrakovyan (Kl'nikovyan).

This is an abstract of the results obtained in four independent experiments. The full text has been published in Russian in the Zhurnal eksperimental'noy i teoreticheskoy fiziki, 35, 1335 (1956).

ANDRIANOV, M.; GAL'PERIN, I.

Mechanize the evening receiving and payment operations. Den. 1
kred. 21 no.8:66-67 Ag '63. (MIRA 16:9)

1. Upravlyayushchiy Timiryazevskim otdeleniyem Gosbanka Moskvyy (for Andrianov).
 2. Glavnyy bukhgalter Timiryazevskogo otdeleniya Gosbanka Moskvyy (for Gal'perin).
- (Banks and banking--Accounting) (Machine accounting)

GAL'PERIN, I.

The strength of the group. Prom. koop. 12 no.2:9 P '58. (MIRA 11:1)

1. Predsedatel' pravleniya oblpromsovet, Irkutsk.
(Irkutsk Province--Cooperative societies)

"... in the article 'The ... meteorological stations and posts'"

Meteorol. i Klimatologiya, No 2, 31-33, 1964

The finding is that the description of visually observed phenomena is supplemented by a list of conditions necessary for the formation of the given phenomenon. Thus morphological criteria are replaced by genetic criteria and this imparts to the observations a selective character. (RMZool, no 6, 1964)

SO: Sum. 492, 12 May 65

YUDIN, I.A.; GAL'PERIN, I.A.

~~XXXXXXXXXXXXXXXXXXXX~~
Flights of bolides. Priroda 45 no.10:111-112 0 '56. (MLRA 9:11)

1. Ural'skaya komissiya po meteoritam (for Yudin). 2. Gidrometeorostantsiya "Kuygan", Alma-Atinskaya oblast'.
(Meteors)

AUTHOR: Gal'perin, I.A.

SCV-26-58-11-51/20

TITLE: An Unusual Cloudiness (Neobychnaya oblachnost')

PERIODICAL: Priroda, 1958,⁴⁷ Nr 11, p 110 (USSR)

ABSTRACT: On 26 March 1958, at 0340 Moscow time, 15 minutes before sunrise and with only a few cirrus and cirro-cumulus clouds in the sky, the author observed in the south Balkhash region near the Ilya river mouth, how a light grey cloud looking like a billow with clearly outlined crests and the base 50 to 75 m above the ground surface appeared on the west horizon, moved fast from west to eastsoutheast and covered almost half the sky when it had reached the zenith. A second such billow followed when the first was still visible at a distance of 10 to 15 km. Six such billows followed one another. This phenomenon was accompanied by concomitant increases in air pressure of 2.7 millibars per billow, a temperature drop from +1.1 to 1.6°C to +0.3°C, a wind intensity increase from 1 m/sec to gushes of 15m/sec in the direction

Card 1/2

An Unusual Cloudiness

SCV-26-58-11-31/49

of the cloud passage, and a drop of relative humidity of 1%.
These secondary phenomena decreased from cloud to cloud.

ASSOCIATION: Gidrometstantsiya "Kuygan" /Alma-Atinskaya obl. (The "Kuygan"
Hydrometeorological Station /Alma-Ata Oblast')

1. Clouds--Turbulence

Card 2/2

CHERNOGOROV, P.V.; BOBROV, A.V.; Prinimali uchastiye: BABARYKIN, N.V.;
MONOYENKO, I.P.; MOREV, I.P.; KUTUYEVA, P.S.; OKUL'SKIY, M.K.;
GAL'PERIN, I.B.; VASINA, Z.M.; BERNISHTYN, S.I.; BALISKIY, Y.R.

Effect of foundry iron prepared by a non-blast-furnace method on
the quality of foundings. Lit.proizv. no.7:9-12 Je '60.
(MIRA 13:7)

(Cast iron--Metallurgy)
(Foundries--Quality control)

GAL'PERIN, I.B.

Device for the introduction of prosthesis in plastic surgery
of the femoral artery. Eksper. khir. i anest. 7 no.5:48-49
S-O '62. (MIRA 17:10)

1. Iz kafedry obshchey khirurgii (zav.- prof. I.V. Danilov)
Kalininskogo meditsinskogo instituta na baze Gorodskoy
bol'nitsy No.6 (glavnyy vrach I.B. Gal'perin), Kalinin.

GAL'PERIN, I. I.

PA 30732

USSR/Engineering
Regulators
Synchronous Machines

Jul/Aug 1946

"Structure and the Number of Links in Control Systems,"
I. I. Gal'perin, Candidate in Technical Sciences,
Laboratory of Steam Turbines, 9 pp

"Izvest VTI" No 7/8 (135/136)

Article is divided into four main sections: 1) general introduction, 2) synthesis of connection of any sequence, 3) determination of the structure, and 4) classification of the links. Well illustrated with brief explanations for each of the pictured methods of control systems.

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Galperin, I. I.

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USSR/Hydraulic Systems
Regulators

Jul 1947

"Compound Regulation of Hydraulic Systems,"
I. I. Galperin, 2 pp

"Izv VTI" No 7

Gives general procedure of synthesis and economy
in linear hydraulic systems with compound regula-
tion, and practical evaluation of the systems
obtained. Systems are recommended with springless
servomotors. Chiefly mathematical discussion,
with schematic diagrams.

1451